

WHAT IS CLAIMED IS:

- 1 1. A radio frequency (RF) transceiver comprising:
2 a radio frequency (RF) modem section comprising:
3 receive path circuitry capable of receiving and
4 down-converting an incoming RF signal to thereby produce an
5 incoming baseband signal; and
6 transmit path circuitry capable of receiving and
7 up-converting an outgoing baseband signal to thereby
8 produce an outgoing RF signal;
9 a baseband section comprising baseband circuitry
10 capable of receiving and processing said incoming baseband signal
11 and capable of generating said outgoing baseband signal; and
12 a power-saving apparatus capable of determining that
13 said baseband section is idle and, in response to said
14 determination, reducing a power supply voltage providing power
15 to said baseband section.
- 1 2. The RF transceiver as set forth in Claim 1 wherein said
2 power-saving apparatus is further capable of reducing a power
3 supply voltage providing power to said receive path circuitry.

1 3. The RF transceiver as set forth in Claim 2 wherein said
2 power-saving apparatus comprises a timer and a switch operable
3 to switch said power supply voltage on and off to said receive
4 path circuitry.

1 4. The RF transceiver as set forth in Claim 3 wherein said
2 power-saving apparatus is further capable of monitoring said
3 incoming baseband signal during a time period when said power
4 supply voltage is switched on to said receive path circuitry and
5 determining if said incoming baseband signal is directed to said
6 RF transceiver.

1 5. The RF transceiver as set forth in Claim 4 wherein said
2 power-saving apparatus, in response to a determination that said
3 incoming baseband signal is directed to said RF transceiver,
4 increases said power supply voltage providing power to said
5 baseband section.

1 6. The RF transceiver as set forth in Claim 4 wherein said
2 power-saving apparatus, in response to a determination that said
3 incoming baseband signal is directed to said RF transceiver,
4 increases said power supply voltage providing power to said
5 receive path circuitry.

1 7. The RF transceiver as set forth in Claim 6 wherein said
2 power-saving apparatus is further capable of reducing a power
3 supply voltage providing power to said transmit path circuitry.

1 8. The RF transceiver as set forth in Claim 7 wherein said
2 power-saving apparatus, in response to a determination that said
3 incoming baseband signal is directed to said RF transceiver,
4 increases said power supply voltage providing power to said
transmit path circuitry.

9. The RF transceiver as set forth in Claim 1 wherein said
power-saving apparatus is further capable of reducing a power
supply voltage providing power to said transmit path circuitry.

10. The RF transceiver as set forth in Claim 9 wherein said
power-saving apparatus is further capable of monitoring said
incoming baseband signal and determining if said incoming
baseband signal is directed to said RF transceiver.

11. The RF transceiver as set forth in Claim 10 wherein said power-saving apparatus, in response to a determination that said incoming baseband signal is directed to said RF transceiver, increases said power supply voltage providing power to said transmit path circuitry.

12. The RF transceiver as set forth in Claim 11 wherein said power-saving apparatus, in response to said determination that said incoming baseband signal is directed to said RF transceiver, increases said power supply voltage providing power to said baseband section.

1 13. A method of reducing power consumption in a radio
2 frequency transceiver comprising: 1) receive path circuitry for
3 receiving and down-converting an incoming RF signal to produce
4 an incoming baseband signal; 2) transmit path circuitry for
5 receiving and up-converting an outgoing baseband signal to
6 produce an outgoing RF signal; and 3) a baseband section
7 comprising baseband circuitry for receiving and processing the
8 incoming baseband signal and generating the outgoing baseband
9 signal, the method comprising the steps of:

10 determining that the baseband section is idle; and

11 in response to the determination that the baseband
12 section is idle, reducing a power supply voltage providing power
13 to the baseband section.

14 14. The method as set as set forth in Claim 13 further
15 comprising the step of reducing a power supply voltage providing
16 power to the receive path circuitry.

17 15. The method as set forth in Claim 14 further comprising
18 the step of switching the power supply voltage on and off to the
19 receive path circuitry.

1 16. The method as set forth in Claim 15 further comprising
2 the steps of:

3 monitoring the incoming baseband signal during a time
4 period when the power supply voltage is switched on to the
5 receive path circuitry; and

6 determining if the incoming baseband signal is directed
7 to the RF transceiver.

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1 20. The method as set forth in Claim 19 further comprising
2 the steps, in response to a determination that the incoming
3 baseband signal is directed to the RF transceiver, of increasing
4 the power supply voltage providing power to the transmit path
5 circuitry.

1 21. The method as set forth in Claim 13 further comprising
2 the step of reducing a power supply voltage providing power to
the transmit path circuitry.

22. The method as set forth in Claim 21 further comprising
the steps of monitoring the incoming baseband signal and
determining if the incoming baseband signal is directed to the
RF transceiver.

1 23. The method as set forth in Claim 22 further comprising
2 the step, in response to a determination that the incoming
3 baseband signal is directed to the RF transceiver, of increasing
4 the power supply voltage providing power to the transmit path
5 circuitry.

1 24. The method as set forth in Claim 23 further comprising
2 the step, in response to the determination that the incoming
3 baseband signal is directed to the RF transceiver, of increasing
4 the power supply voltage providing power to the baseband section.

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